Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.   (Currently Amended) A means for switching data, the means comprising:

a data bus,

a plurality of devices ~~adapted~~configured to exchange data with each other via the data bus, each device being ~~adapted~~configured to receive data from and transmit data to at least one corresponding I/O port, at least one first device being ~~adapted~~configured to receive data from and transmit data to a plurality of corresponding I/O ports,

arbiter means for determining an order of exchanging, on the data bus, of data between the devices,

the devices being ~~adapted~~configured to:

receive and store data from a corresponding I/O port, transmit, to the arbiter, information relating to congestion or availability of a corresponding port,

receive, from the arbiter, information indicating whether the received data may be transmitted over the data bus,

transmit, if the information received indicates that the data may be transmitted, the data over the data bus, and

receive data from the data bus and forward the received data to a corresponding I/O port,

the arbiter being ~~adapted~~configured to:

receive, from the devices, the congestion or non-availability information, and

determine the order of exchanging data on the basis of the congestion information[[.]];

wherein a device is configured to determine congestion at a corresponding I/O port and to

transmit corresponding information to the arbiter, and wherein the arbiter is configured to override any congestion or non-availability of a receiving device or I/O port when a congested I/O port wishes to transmit data thereto, and inform the pertaining device that the congested I/O port is allowed to transmit data.

2. (Currently Amended) A means according to claim 1, wherein a plurality of the devices are ~~adapted~~configured to exchange data with each other directly over the data bus at at least substantially the same rate.

3- 0. (Cancelled).

11. (Currently Amended) A means according to claim 1, wherein the arbiter is ~~adapted~~configured to receive information relating to each piece of data received at the I/O ports, the information comprising an I/O port and/or a device to receive the piece of data.

12. (Currently Amended) A means according to claim 1, wherein the arbiter is ~~adapted~~configured to provide, to the at least one first device, information relating to which of the corresponding ports is allowed to transmit data.

13. (Currently Amended) A means for switching data, the means comprising:
a data bus,
a plurality of devices configured to exchange data with each other via the data bus, each device being configured to receive data from and transmit data to at least one corresponding I/O port, at least one first device being configured to receive data from and transmit data to a plurality of corresponding I/O ports,
arbiter means for determining an order of exchanging, on the data bus, of data between the devices,
the devices being configured to:

receive and store data from a corresponding I/O port, transmit, to the arbiter, information relating to congestion or availability of a corresponding port,

receive, from the arbiter, information indicating whether the received data may be transmitted over the data bus,

transmit, if the information received indicates that the data may be transmitted, the data over the data bus, and

receive data from the data bus and forward the received data to a corresponding I/O port,

the arbiter being configured to:

receive, from the devices, the congestion or non-availability information, and

determine the order of exchanging data on the basis of the congestion information;

wherein the arbiter is configured to provide, to the at least one first device, information relating to which of the corresponding ports is allowed to transmit data; and

~~according to claim 12,~~ wherein the arbiter is ~~adapted~~configured to examine, for the at least one first device, whether a first port of the plurality of ports wishes to transmit data to a congested or non-available port and to, if so, examine whether another port of the plurality of ports wishes to transmit data to a non-congested or available port and, if so, transmit, to the at least one first device, information relating to the other port being allowed to transmit data.

14.   (Currently Amended) A means according to claim 1, wherein the at least one first device is ~~adapted~~configured to determine to which of its corresponding I/O ports to transmit data received from the data bus.

15.   (Cancelled).

16.   (Currently Amended) A means according to claim 1, wherein each device is ~~adapted~~configured to transmit all pieces of data received at the corresponding I/O ports to the

data bus.

17.   (Currently Amended) A means according to claim 1, wherein at least one third device further comprises a processing means ~~adapted~~configured to:

provide a priority for each piece of data received at its I/O port(s),

divide each piece of data received at its I/O port(s) into cells before transmission thereof to the data bus and to assemble cells received from the data bus into pieces of data before outputting from an I/O port,

process each piece of data received at an I/O port, and/or derive, from each piece of data received at an I/O port, information for transmission to the arbiter.

18.   (Original) A means according to claim 17, wherein the device comprises a processing means for each I/O port of the device.

19.   (Currently Amended) A means according to claim 17, wherein the at least one third device has means for providing a priority for each piece of data received at its corresponding I/O port(s), and wherein the arbiter is ~~adapted~~configured to determine the order of exchanging data also on the basis of the priority of the data.

20.   (Currently Amended) A means according to claim 1, further comprising a Look-Up Engine ~~adapted~~configured to receive information relating to each piece of data received at an I/O port and to derive, from the information, identifying information relating to one or more I/O port(s) or device(s) to receive the piece of data.

21.   (Currently Amended) A means according to claim 20, wherein each device is further ~~adapted~~configured to derive, from each piece of data received, information relating to the piece of data, to transmit the information to the [[LU]]Look-Up Engine, receive identifying information from the LU Engine, and to exchange the identifying information on the data bus

together with the piece of data.

22.   (Original) A means according to claim 20, wherein the data and identifying information is stored subsequent to receipt of the identifying information and prior to exchange thereof on the data bus.

23.   (Currently Amended) A means according to claim 20, wherein at least one fourth device is ~~adapted~~configured to, on the basis of the identifying information, determine whether the data is addressed for the device or not.

24.   (Currently Amended) A means for switching data, the means comprising:
a data bus,
a plurality of devices configured to exchange data with each other via the data bus, each device being configured to receive data from and transmit data to at least one corresponding I/O port, at least one first device being configured to receive data from and transmit data to a plurality of corresponding I/O ports,
arbiter means for determining an order of exchanging, on the data bus, of data between the devices,
the devices being configured to:
receive and store data from a corresponding I/O port, transmit, to the arbiter, information relating to congestion or availability of a corresponding port,
receive, from the arbiter, information indicating whether the received data may be transmitted over the data bus,
transmit, if the information received indicates that the data may be transmitted, the data over the data bus, and
receive data from the data bus and forward the received data to a corresponding I/O port,
the arbiter being configured to:

receive, from the devices, the congestion or non-availability information, and

determine the order of exchanging data on the basis of the congestion

information;

a Look-Up Engine configured to receive information relating to each piece of data

received at an I/O port and to derive, from the information, identifying information relating to

one or more I/O port(s) or device(s) to receive the piece of data; and

~~according to claim 20,~~ wherein the arbiter is ~~adapted~~configured to, when more than one

port or device is to receive a piece of data received at a receiving device, determine which of the

ports and devices are available or non-congested and transmit information to the receiving device

in order to have it forward the data to those ports and devices, and subsequently, when other of

the ports or devices are available or non-congested, inform the receiving device to forward the

data to those devices or ports.

25.   (Currently Amended) A method of switching data in a switching means

comprising:

a data bus,

a plurality of devices ~~adapted~~configured to exchange data with each other via the data

bus, each device being ~~adapted~~configured to receive data from and transmit data to at least one

corresponding I/O port, at least one first device being ~~adapted~~configured to receive data from

and transmit data to a plurality of corresponding I/O ports, and

arbiter means for determining an order of exchanging, on the data bus, of data between

the devices,

the method comprising the each device:

receiving and storing data from a corresponding I/O port,

transmitting, to the arbiter, information relating to congestion or availability of a

corresponding port,

receiving, from the arbiter, information indicating whether the received data may

be transmitted over the data bus,

transmitting, if the information received indicates that the data may be transmitted, the data over the data bus, and

receiving data from the data bus and forward the received data to a corresponding I/O port,

and the arbiter:

receiving, from the devices, the congestion or non-availability information, and

determining the order of exchanging data on the basis of the congestion information[[.]]:

wherein a device determines congestion at a corresponding I/O port and transmits corresponding information to the arbiter, and wherein the arbiter overrides any congestion or non-availability of a receiving device or I/O port when a congested I/O port wishes to transmit data thereto, and informs the pertaining device that the congested I/O port is allowed to transmit data.

26.   (Original) A method according to claim 25, wherein a plurality of the devices exchange data with each other directly over the data bus at at least substantially the same rate.

27-34. (Cancelled).

35.   (Original) A method according to claim 25, wherein the arbiter receives information relating to each piece of data received at the I/O ports, the information comprising an I/O port and/or a device to receive the piece of data.

36.   (Original) A method according to claim 25, wherein the arbiter provides, to the at least one first device, information relating to which of the corresponding ports is allowed to transmit data.

37.　(Currently Amended) A method of switching data in a switching means comprising:

a data bus,

a plurality of devices configured to exchange data with each other via the data bus, each device being configured to receive data from and transmit data to at least one corresponding I/O port, at least one first device being configured to receive data from and transmit data to a plurality of corresponding I/O ports, and

arbiter means for determining an order of exchanging, on the data bus, of data between the devices,

the method comprising the each device:

receiving and storing data from a corresponding I/O port,

transmitting, to the arbiter, information relating to congestion or availability of a corresponding port,

receiving, from the arbiter, information indicating whether the received data may be transmitted over the data bus,

transmitting, if the information received indicates that the data may be transmitted, the data over the data bus, and

receiving data from the data bus and forward the received data to a corresponding I/O port,

and the arbiter:

receiving, from the devices, the congestion or non-availability information, and

determining the order of exchanging data on the basis of the congestion information;

wherein the arbiter provides, to the at least one first device, information relating to which of the corresponding ports is allowed to transmit data; and

according to claim 36, wherein the arbiter examines, for the at least one first device, whether a first port of the plurality of ports wishes to transmit data to a congested or non-available port and to, if so, examines whether another port of the plurality of ports wishes to

transmit data to a non-congested or available port and, if so, transmits, to the at least one first device, information relating to the other port being allowed to transmit data.

38.   (Original) A method according to claim 25, wherein the at least one first device determines to which of its corresponding I/O ports to transmit data received from the data bus.

39.   (Cancelled).

40.   (Original) A method according to claim 25, wherein each device transmits all pieces of data received at the corresponding I/O ports to the data bus.

41.   (Original) A method according to claim 25, wherein at least one third device further comprises one or more of the processing steps of:

providing a priority for each packet or frame received at its I/O port(s),

dividing each packet or frame received at its I/O port(s) into cells before transmission thereof to the data bus and assembling cells received from the data bus into frames or packets before outputting from an I/O port,

processing each packet or frame received at an I/O port, and

deriving, from each packet or frame received at an I/O port, information for transmission to the arbiter.

42.   (Original) A method according to claim 41, wherein the at least one third device performs one or more processing steps for each I/O port of the device.

43.   (Original) A method according to claim 41, wherein the at least one third device performs the step of providing a priority for each piece of data received at its corresponding I/O port(s), and wherein the arbiter determines the order of exchanging data also on the basis of the priority of the data.

44.   (Original) A method according to claim 25, further comprising the step of a
Look-Up Engine receiving information relating to each piece of data received at an I/O port and
deriving, from the information, identifying information relating to one or more I/O port(s) or
device(s) to receive the piece of data.

45.   (Currently Amended) A method according to claim 44, wherein each device
further derives, from each piece of data received, information relating to the piece of data,
transmits the information to the LU Engine, receives identifying information from the
[[LU]]Look-Up Engine, and exchanges the identifying information on the data bus together with
the piece of data.

46.   (Original) A method according to claim 44, wherein the data and identifying
information is stored subsequent to receipt of the identifying information and prior to exchange
thereof on the data bus.

47.   (Original) A method according to claim 44, wherein at least one fourth device
determines, on the basis of the identifying information, whether the data is addressed for the
device or not.

48.   (Currently Amended) A method of switching data in a switching means
comprising:
        a data bus,
        a plurality of devices configured to exchange data with each other via the data bus, each
device being configured to receive data from and transmit data to at least one corresponding I/O
port, at least one first device being configured to receive data from and transmit data to a
plurality of corresponding I/O ports, and

arbiter means for determining an order of exchanging, on the data bus, of data between the devices,

the method comprising the each device:

receiving and storing data from a corresponding I/O port,

transmitting, to the arbiter, information relating to congestion or availability of a corresponding port,

receiving, from the arbiter, information indicating whether the received data may be transmitted over the data bus,

transmitting, if the information received indicates that the data may be transmitted, the data over the data bus, and

receiving data from the data bus and forward the received data to a corresponding I/O port,

and the arbiter:

receiving, from the devices, the congestion or non-availability information, and

determining the order of exchanging data on the basis of the congestion information;

the step of a Look-Up Engine receiving information relating to each piece of data received at an I/O port and deriving, from the information, identifying information relating to one or more I/O port(s) or device(s) to receive the piece of data; and

according to claim 44, wherein the arbiter determines, when more than one port or device is to receive a piece of data received at a receiving device, which of the ports and devices are available or non-congested and transmit information to the receiving device in order to have it forward the data to those ports and devices, and subsequently, when other of the ports or devices are available or non-congested, informs the receiving device to forward the data to those devices or ports.

49-84. (Cancelled).